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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10763,124	01/22/2004	Wolfgang Schmidt	0275M-000864	4188

27572 7590 04/18/2005

HARNES, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

SHAW, CLIFFORD C

ART UNIT PAPER NUMBER

1725

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

25

Office Action Summary

Application No.

10/763,124

Applicant(s)

SCHMIDT ET AL.

Examiner

Clifford C. Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0122, 0206</u> . | 6) <input type="checkbox"/> Other: ____. |

Detailed Action

1.) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.) Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, step (b), applicant refers to "a tolerance curve" and in step (e), applicant refers to "creating a tolerance curve". It is not clear what the difference is between the tolerance curve of step (b) and the subsequently created tolerance curve of step (e) is and it is unclear how these steps correspond to the invention disclosed. It is further unclear how the step of "comparing a tolerance curve and the parameter" in step (b) and the step of "determining a difference between the tolerance curve and the parameter" in step (f) correspond to the invention disclosed and it is unclear which to the two afore mentioned tolerance curves is being referred to in step (f). The other claims are inadequate under 35USC112 in that they depend from claim 1.

3.) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4.) Claims 1-7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (4,721,947). Figure 2A and columns 8-12 in the patent to Brown (4,721,947) disclose a

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process for determining the quality of a weld with the steps of measuring an arc voltage at element 63 and comparing this measured parameter to a tolerance curve created from a smoothed measurement curve as discussed in column 12. The claims differ from Brown (4,721,947) in suggesting that two different tolerance curves are compared in a particular time sequence (this aspect of the claims is not clear – see the rejection under 35USC112 above) and in calling for particular system timing parameters in the dependent claims. These differences do not patentably distinguish over the prior art. The patent to Brown (4,721,947) teaches comparing a measured parameter to two different sets of tolerance curves (see column 8 of Brown (4,721,947)). These multiple comparisons could obviously have been performed in any convenient sequence based on routine design considerations, thereby satisfying the claim limitations. In regard to the particular timing parameters in the dependent claims, it would have been obvious that the system of Brown (4,721,947) be adjusted for these parameters, the motivation being to use the system to monitor a particular welding situation where these parameters were apposite.

5.) Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (4,721,947) as applied to claims 1-7, 11, and 12 above, and further in view of Hirayama et al. (6,271,500). The only aspect of the claims to which the rejection above does not apply is the provision for using low pass filters. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have used a low pass filter in the monitoring system of Brown (4,721,947), the motivation being the teachings of Hirayama et al. (6,271,500) that such is advantageous in an arc welding monitoring

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system (see elements 6 and 7 in figure 1 of Hirayama et al. (6,271,500) and the discussion thereof). In regard to the claim limitations directed to particular parameters associated with the low pass filters, these are considered to be representative of routine design choices, once the decision to use low pass filtering has been made.

6.) Claims 13-16, 20-28, 32, and 34-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (4,721,947) taken with Van Allen (5,676,867, cited by applicant) and Mallett (4,267,426). As discussed above, the patent to Brown (4,721,947) discloses a system and method for monitoring an arc welding environment wherein a measured arc parameter is compared to upper and lower tolerance curves. The claims differ from Brown (4,721,947) in calling for monitoring an arrangement wherein an element is welded to a component, with the element being fed to a welding head. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have used the monitoring approach taught by Brown (4,721,947) in conjunction with any known arc welding technology. In particular, it would have been obvious to have used the system of Brown (4,721,947) to monitor an element-to-component welding system in view of the teachings of Van Allen (5,676,867) that it is advantageous to monitor the welding carried out by such a system (see the abstract of Van Allen (5,676,867)). In making this combination, it would have been obvious that the system have an element feeder in view of the teachings of Mallett (4,267,426) that such are advantageous in conjunction with stud welders such as that of Van Allen (5,676,867) (see element feeder 16, 18 in Mallett (4,267,426)).

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7.) Claims 17-19, 29-31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (4,721,947) taken with Van Allen (5,676,867, cited by applicant) and Mallett (4,267,426) as applied to claims 13-16, 20-28, 32, and 34-43 above, and further in view of Hirayama et al. (6,271,500). The only aspect of the claims to which the rejection above does not apply is the provision for using low pass filters. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have used a low pass filter in the monitoring system of Brown (4,721,947), the motivation being the teachings of Hirayama et al. (6,271,500) that such is advantageous in an arc welding monitoring system (see elements 6 and 7 in figure 1 of Hirayama et al. (6,271,500) and the discussion thereof). In regard to the claim limitations directed to particular parameters associated with the low pass filters, these are considered to be representative of routine design choices, once the decision to use low pass filtering has been made.

8.) The patent to Retfalvi et al. (4,605,836) is cited to show a prior art welding monitor that compares a sensed parameter to two distinct values (see the abstract of the patent).

Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw
Primary Examiner
Art Unit 1725

April 14, 2005